

REMARKS

Claims 1, 3, 5-63, and 67-112 are pending after entry of this paper. Claims 2-4, 6-65, and 80-83 have been rejected. Claim 1 has been allowed. Claims 5, 66, and 109 have been objected. Claims 67-79, 84-108, and 110-111 have been withdrawn. Claims 2, 4, and 64-66 have been cancelled. Applicants reserve the right to pursue withdrawn claims in a divisional or continuing application. Claim 112 has been added incorporating the subject matter of claim 2. No new matter has been introduced by these amendments and additions. Reconsideration and withdrawal of the pending rejections in view of the below remarks are respectfully requested.

Applicants acknowledge the allowance of claim 1.

Response to Rejections under 35 U.S.C. §103

Claims 2-4, 6-65 and 80-83 have been rejected under 35 U.S.C. §103(a) as being unpatentable over USPNI: 4,661,289 to Parslow et al. in view of Janeckova et al. (*Ceska Mykologie*, (1977) Vol. 31, No. 4, pp. 206-213 (Abstract)). Applicants respectfully traverse the rejection. Specifically, the Examiner states that Parslow teaches compositions comprising fungal cellulase, surfactants, cationic fabric-softening compounds and builders that are useful for cleaning and softening natural and synthetic fibers. However, the Examiner admits that Parslow does not teach the claimed composition (Office Action, page 4). Janeckova is combined for disclosing the fungus *Chrysosporium lucknowense* isolated from soil. The Examiner further makes reference of record to Bukhtojarov for evidence that *Chrysosporium lucknowense* contains "cellulolytic enzymes including endoglucanases, cellobiohydrolases, and cellulases that have neutral and/or alkaline cellulose [sic] activity, specifically EG24 and EG47" (Office Action, page 5) (Bukhtojarov et al. *Biochemistry (Moscow)*. 2004 May, 69(5):542-51; Abstract). Applicants respectfully disagree and remind the Examiner that for an obviousness rejection, "the subject matter as a whole would have been obvious at the

time the invention was made" (§103(a); emphasis added). However, in order to expedite prosecution of the instant application, claim 2 has been cancelled.

Parslow et al. has been combined with Janeckova et al. for allegedly making obvious the instant claims. Parslow discloses a detergent composition containing a surfactant, cationic fabric softening compound and a detergency builder containing an alkaline fungal cellulase (Col. 2, Ins. 15-29). Parslow further provides examples of alkaline cellulases including: cellulases produced by a strain of *Humicola insolens* (*Humicola grisea* var. *thermoidea*), the *Humicola* strain DSM 1800, and cellulases produced by a fungus of *Bacillus N* or an *Aeromonas* cellulase 212-producing fungus. (Col. 6, Ins. 21-26).

Applicants again assert that Janeckova merely reports the existence of the fungus *Chrysosporium lucknowense* as isolated from soil samples. There is no further description or characterization of any of the listed species except to indicate that the soil samples were collected from the Himalayas. As the Examiner is well aware, the 2004 Bukhtojarov abstract is not prior art. The Bukhtojarov abstract discloses that some *Chrysosporium* enzymes are in the acidic pH range while others are in an alkaline pH range. The Examiner states that the enzymes having activity in an alkaline pH range was merely an unappreciated property of the fungus *Chrysosporium*.

Although the Examiner maintains that one of ordinary skill in the art at the time the invention was made would have modified the Parslow composition by substituting the *Humicola insolens* alkaline cellulase with *Chrysosporium lucknowense* cellulases that have neutral and/or alkaline activity, applicants respectfully assert that a person of ordinary skill in the art would have no reason to modify the Parslow composition. (OA- pg 5) The Examiner further states that the ordinary skilled artisan would have been motivated to make this substitution because according to Parslow, "fungal cellulases are useful for cleaning and softening natural and synthetic fibers and that neutral/alkaline cellulases have the advantage of better wash performance within a wider pH range." (OA- pg 5)

Applicants assert that the Examiner has improperly elevated the standard of a "person having ordinary skill in the art" to that of an inventor, or the applicant in this

case. Under 35 U.S.C. §103(a), a “patent may not be obtained...if...the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.” (emphasis added). As quoted in *Standard Oil Company v. American Cyanamid Company*, 774 F2d 448, 7 (Fed. Cir., 1985) (emphasis added):

The statutory emphasis is on a person of ordinary skill. Inventors, as a class, according to the concepts underlying the Constitution and the statutes that have created the patent system, possess something 'call it what you will' which sets them apart from the workers of ordinary skill, and one should not go about determining obviousness under § 103 by inquiring into what patentees (i.e., inventors) would have known or would likely have done, faced with the revelations of references. A person of ordinary skill in the art is also presumed to be one who thinks along the line of conventional wisdom in the art and is not one who undertakes to innovate, whether by patient, and often expensive, systematic research or by extraordinary insights, it makes no difference which.

One of the problems in the art was obtaining an alkaline detergent composition that cleans well and yet softens a wide array of fibers and fabric materials. Parslow's solution was to combine the cationic fabric softener with an anionic and/or nonionic surfactant and an alkaline fungal cellulase. Parslow surprisingly found specific fungal alkaline cellulases, i.e., “cellulases produced by a strain of *Humicola insolens* and cellulases produced by a fungus of Bacillus N or a cellulase 212-producing fungus of the genus *Aeromonas*.” (Col. 6, lns 21-26) Therefore, the person of ordinary skill in the art, who is knowledgeable of the art, would have appreciated Parslow's solution and utilized one of the cellulases identified in Parslow. As mentioned above, the person of ordinary skill in the art is not an innovator. The Examiner has confused the level of skill of a person of ordinary skill in the art with that of an inventor (i.e., applicant). The Examiner is suggesting that the ordinary skilled artisan ignore the solutions known in the art to undertake laborious experimentation to seek out other solutions, i.e., identify and measure cellulase activity of cellulases isolated from fungi other than those disclosed in Parslow. As stated in *Standard Oil Company v. American Cyanamid Company* (supra), the person of ordinary skill in the art does not innovate, either by

systematic research or extraordinary insights. The Examiner's suggestion is appropriate to ask of an inventor or one who has extraordinary skill in the art who is innovative, but not an ordinary skilled artisan. Therefore, after reading the Parslow and Janaeckova publications, one of ordinary skill in the art would have, at the very most, utilized the alkaline cellulases described in Parslow to remedy the problem.

Thus, based on what was known in the art including Janeckova's finding of a soil sample containing *Chrysosporium lucknowense*, substituting a cellulase derived from *Chrysosporium lucknowense* or from any of the other fungal species identified from soil by Janeckova for use in the Parslow composition comprising an alkaline fungal cellulase could not and would not even have been contemplated. Someone skilled in the art would not have substituted any fungal cellulase into the composition of Parslow without some reason. However, the ordinary skilled artisan might have substituted one of the known alkaline fungal cellulases as identified by Parslow.

In summary, the Examiner has raised the standard of a person of ordinary skill in the art to that of an innovator or inventor. The person of ordinary skill in the art, having read of a solution to the problem in Parslow, would go no further than to use the detergent composition comprising one of the disclosed alkaline cellulases taught by Parslow.

Applicants understand that some hindsight can be used on the part of the Examiner. However, impermissible hindsight was apparently used by basing knowledge obtained only from applicants' disclosure. This hindsight, in addition to the Examiner's higher standard for a person of ordinary skill in the art, is improper.

Moreover, the rejections to *Chrysosporium* protein fractions and cellulases, including, endoglucanases and cellobiohydrolases (claims 10-21) are also not obvious as nothing in Parslow and Janeckova discloses having at least 50% maximal cellulase activity in a particular pH range as measured by specific assays, particular molecular weights, and pI values. The combination of the Parslow and Janeckova publications does not disclose the *Chrysosporium* protein fractions or cellulases, nor the specific parameters as claimed.

With respect to the methods for generating mutant strains of *Chrysosporium* having enhanced cellulase activity at neutral and/or alkaline pH, applicants assert that Parslow, which is silent to the *Chrysosporium* wild type, is also silent with respect to the mutant strain and the methods of generating such a mutant. The combination of Janeckova does not remedy the deficiencies of Parslow. Janeckova is equally silent with respect to mutant strains of *Chrysosporium lucknowense*.

Therefore, the combination of Parslow and Janeckova does not make obvious the claimed invention. Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. §103(a) rejection of claims 2-4, 6-65 and 80-83 in view of the aforementioned remarks.

Dependent Claims

The applicants have not independently addressed all of the rejections of the dependent claims. The applicants submit that for at least similar reasons as to why independent claim(s) 1, 24, 36, 40, 43, 46, 49, 52, 55, 58, 61, 80, 110, and 112 from which all of the dependent claims 3, 5-23, 25-35, 37-39, 41-42, 44-45, 47-48, 50-51, 53-54, 56-57, 59-60, 62-63, 81-83, 109, and 111 depend are believed allowable as discussed *supra*, the dependent claims are also allowable. The applicants however, reserve the right to address any individual rejections of the dependent claims and present independent bases for allowance for the dependent claims should such be necessary or appropriate.

Thus, applicants respectfully submit that the invention as recited in the claims as presented herein is allowable over the art of record, and respectfully request that the respective rejections be withdrawn.

CONCLUSION

Based on the foregoing amendments and remarks, applicants respectfully request reconsideration and withdrawal of the rejection of claims and allowance of this

application. Moreover, applicants respectfully request rejoinder of the withdrawn claims in view of allowable subject matter. Favorable action by the Examiner is earnestly solicited.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. **50-2547**, Order No. **214275-30003**.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. **50-2547**, Order No. **214275-30003**.

Respectfully submitted,
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